3rd International Workshop on Quarantine Pests
August 27-30, 2013
Manzanillo, Colima, Mexico
CITRUS HEALTH MANAGEMENT AREAS
WHAT IS A CHMA?

- Citrus Health Management Area
- Grower defined grouping of citrus acreage
- Grower participants coordinate psyllid control efforts (year-round pesticide applications)
- Manage pesticide resistance through coordinated rotation of MOAs
WHY DEVELOP A CHMA?

- Slow spread of HLB through use of improved psyllid control methods
- Prolong the usefulness of our current management tools
WHY DEVELOP A CHMA?

- Sustain current citrus acreage until an HLB remedy is developed
- Facilitate adoption of new technology
- Utilize the CHMA concept for addressing production issues in the future
CHMA Participants

Collaborative efforts of growers, federal and state regulatory agencies and researchers
Grower driven program to coordinate the application of materials to reduce Asian Citrus Psyllid (ACP) populations in commercial citrus

- Voluntary
- No Mandates
Citrus Health Management Areas

- USDA & DPI personnel jointly monitor ACP populations
- USDA and DPI information systems provide data to growers for coordination of applications
- IFAS maintains the CHMA Website
- IFAS provides application recommendations
CHMA Participants

- Growers motivate neighboring growers to participate
  - Facilitated by citrus extension agents and industry leaders

- Work with other non-grower participants
  - UF/IFAS, USDA, FDACS, and industry organizations
CHMA Organization

- County Extension Agents assist growers in delineating CHMA areas
  - Based on presence and grouping of groves in region

- Establish CHMA leader
CHMA Meeting Goals

- Develop a plan of action
  - Timing and frequency of applications
- Coordinate as many sprays as possible
  - Pesticide rotation schedules
  - Application methods
  - Grower practices/limitations
Strategies

**Individual Control**
- Single grove
- Grove hopping
- ACP exposed to multiple MOA
- Quick re-infestation
- Frequent applications

**Coordinated Control**
- Large amount of acreage
- Quick application
- Single MOA
- More ACP killed = Extended period of control
- Possible reduced number of sprays
- Plan of attack
48 CHMAs

Represents 486,000 acres

93% of Florida Citrus Industry
Area-Wide Surveillance of Asian Citrus Psyllid

- **Survey**
  - 6,000 blocks statewide
  - 3-week monitoring cycle
  - 50 trees / grove block
  - 1 tap sample per tree
  - Data input into IPHIS
  - FDACS and USDA formats data and places on UF/IFAS website for grower access
Monitoring Site Locations within Block
IFAS CHMA Website
ACP
Statewide Status Map
Active CHMA Websites

Citrus Health Management Areas (CHMAs)

UF/IFAS Extension

CHMA Overview

CHMA Toolkit

Contact Information

Active CHMA Websites

NE Desoto CHMA

Current planned pesticide applications
Past pesticide applications
Psyllid scouting reports
CHMA wide ACP trend graph
Join this CHMA – (Receive automatic email updates regarding the latest news and proposed coordinated spray schedules for this CHMA)

NE Desoto CHMA Contacts

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Latest News

NE Desoto report 7/31/13

News Archive
## Block Specific Data

Select Your LOCATION From the Drop Down

<table>
<thead>
<tr>
<th>LOCATION NAME</th>
<th>COUNTY NAME</th>
<th>TRS</th>
<th>CHMA</th>
<th>CYCLE1 (08-01-11 to 08-19-2011)</th>
<th>CYCLE2 (08-22-11 to 09-9-2011)</th>
<th>CYCLE3 (09-12-11 to 09-30-2011)</th>
<th>CYCLE4 (10-03-11 to 10-21-2011)</th>
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<tbody>
<tr>
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<td>40S25E10</td>
<td>52</td>
<td>16</td>
<td>25</td>
<td>9</td>
<td>0</td>
<td>8</td>
</tr>
</tbody>
</table>

| CYCLE       | 25 | 9   | 6   | 16 | 9 | 22 | 3 | 3 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |
|-------------|----|-----|----|----|---|----|---|---|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CYCLE1      | 111| 0   | 0  | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CYCLE2      | 111| 0   | 0  | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CYCLE3      | 111| 0   | 0  | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CYCLE4      | 111| 0   | 0  | 0  | 0 | 0  | 0 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
### CHMA Data Graph

<table>
<thead>
<tr>
<th>CHMA NAME</th>
<th>CYCLE 1</th>
<th>CYCLE 2</th>
<th>CYCLE 3</th>
<th>CYCLE 4</th>
<th>CYCLE 5</th>
<th>CYCLE 6</th>
<th>CYCLE 7</th>
<th>CYCLE 8</th>
<th>CYCLE 9</th>
<th>CYCLE 10</th>
<th>CYCLE 11</th>
<th>CYCLE 12</th>
<th>CYCLE 13</th>
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</thead>
<tbody>
<tr>
<td>Central Highlands 17/27 CHMA</td>
<td>357</td>
<td>530</td>
<td>557</td>
<td>445</td>
<td>756</td>
<td>516</td>
<td>134</td>
<td>201</td>
<td>161</td>
<td>185</td>
<td>914</td>
<td>564</td>
<td>776</td>
</tr>
</tbody>
</table>

**Central Highlands 17/27 CHMA**

- **NUMBER OF ACRES**: 2,285
- **NUMBER OF BLOCKS**: 105
Sectional Mapping Program
CHMA Sectional Mapping Program

- Utilizing the FDACS and USDA scouting data
- TRS (Township, Range, Section) / square mile
- Grouping scouted blocks by TRS
- Plotting data and TRS locations onto interactive map
CHMA Selection
Results and Observations

- Grower participation is increasing as they see the data and results.
- Psyllid populations are decreasing where coordinated applications have been implemented.
Results and Observations

- Applications are being postponed several weeks due to the effectiveness of the coordinated treatments

- Grower interaction is enhanced

- The CHMA concept is a venue for managing other pests and diseases
Statewide Average ACP Population

Average ACP Population

January  
February  
March  
April  
May  
June  
July  
August

2012  
2013
Dormant Periode 2011 - 2012

Low Participation vs High Participation
Fort Meade/Alturas CHMA

Began coordinated sprays
ACP controls

Peak in 2011

Huge reduction in ACP peak

One year gap

Peak in 2012

Further reduction

One year gap

Peak in 2013

slide provided courtesy of Dr. Tim Gottwald
ACP controls for CHMA

- Paired t test was used to test the significant difference between ACP controls.
- ACP pressure is significantly lower inside CHMA, compared with outside CHMA ($p=0.001$) or New Treasure coast CHMA ($p=0.04$)
ACP controls for CHMA comparisons

Volusia CHMA

Bereah / South Frostproof CHMA

NE Desoto CHMA

North Collier CHMA

SE Hendry CHMA

Cycle date

Cycle date

Cycle date

Cycle date
Acknowledgements

- Brandon Page, IFAS
- Dr. Michael Rogers, IFAS
- Tim Riley, USDA
- CRDF
- FDACS
- USDA
For more information:
Visit the Florida CHMA Website:
www.flchma.org

Thank you